DOCUMENT RESUME

ED 099 879 CS 201 764

AUTHOR	Chaffee, Steven H., Ed.; And Others
TITLE	Contributions of Wilbur Schramm to Mass Communication Research. Journalism Monograph No. 36.
INSTITUTION	Association for Education in Journalism.
PUB DATE	Oct 74
NOTE	50p.
AVAILABLE FROM	Professor Harold Wilson, AEJ Publications Business Manager, School of Journalism and Mass Communications, University of Minnesota, Minneapolis, Minnesota 55455 ($2.00)
EDRS PRICE	MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS	Authors; *Communication (Thought Transfer); Developing Nations; Higher Education; Journalism; Mass Media; *Media Research; *Social Change; *Technological Advancement; *Theories
IDENTIFIERS	*Schramm (Wilbur)

ABSTRACT

This monograph describes the philosophical, theoretical, and research contributions of Wilbur Schramm in the field of mass communication research. In the papers that comprise this monograph, three of Schramm's principal areas of investigation are reviewed. Jack Lyle looks at both the integration of mass communication into the field of education via books and courses that were the product of Schramm's personal efforts and his influence on others. Godwin Chu examines Schramm's studies on the role of the media in developing nations. And Wayne Danielson deals with the development and adoption of new communication technologies. The monograph concludes with an incomplete bibliography of Schramm's scholarly works and a list of his short stories. (RB)

Steven H. Chaffee, Ed.,
Godwin C. Chu, Jack Lyle and
Wayne Danielson

BEST COPY AVAILABLE

Contributions of Wilbur Schramm to Mass Communication Research

JOURNALISM MONOGRAPHS

NUMBER THIRTY-SIX • OCTOBER 1974

ED 099879

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

BRUCE H. WESTLEY, *Editor*

EDITORIAL BOARD

RICHARD W. BUDD, JAMES W. CAREY, RICHARD F. CARTER, STEVEN H. CHAFFEE, DAVID G. CLARK, PETER CLARKE, LEWIS DONOHEW, S. WATSON DUNN, RICHARD A. EK, RONALD T. FARRAR, BRADLEY S. GREENBERG, THOMAS H. GUBACK, WILLIAM A. HACHTEN, HANNO HARDT, L. JOHN MARTIN, MAXWELL E. MCCOMBS, JACK M. MCLEOD, JOHN T. MCNELLY, MICHAEL J. PETRICK, IVAN L. PRESTON, GALEN RARICK, KEITH P. SANDERS, LAWRENCE SCHNEIDER, JOHN D. STEVENS, DWIGHT L. TEETER, FREDERICK T. C. YU.

Members of the AEJ Publications Committee: DWIGHT L. TEETER *(Chairman)*, DONALD R. GRUBB, BEN L. YABLONKY, DEL BRINKMAN, DAVID A. HABERMAN, PHILLIP TICHENOR.

Copyright 1974 by the Association for Education in Journalism

Published serially at Lexington, Kentucky, by the Association for Education in Journalism with the support of the American Association of Schools and Departments of Journalism.

Manuscripts and other editorial correspondence should be addressed to the editor, Prof. Bruce H. Westley, Department of Journalism, University of Kentucky, Lexington, Kentucky 40506. Business correspondence, including subscriptions, should be directed to AEJ Publications Business Manager, School of Journalism, University of Minnesota, Minneapolis, Minnesota 55455.

Subscription rates: $5.00 per year, $5.50 outside the United States and Canada. Checks should be made out to Journalism Monographs.

CS 201 764

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Association for Education in Journalism
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

BEST COPY AVAILABLE

JACK LYLE is director of communication research for the Corporation for Public Broadcasting. After receiving his Ph.D. from Stanford University in 1959, he taught for eleven years in the Department of Journalism at the University of California at Los Angeles. In addition to many articles and monographs, his publications include three books co-authored with Schramm (and others): *Television in the Lives of Our Children, The People Look at Educational Television* and *The New Media: Memo to Educational Planners.* He also edited *The News in Megalopolis.*

GODWIN C. CHU is a member of the research staff at the Communication Institute of the East-West Center in Honolulu, Hawaii, on leave from his position as professor of journalism at Southern Illinois University in Carbondale. A former newspaperman in Taiwan and 1963 Stanford Ph.D., he has taught at National Chengchi University in Taipei, at the University of Victoria, British Columbia, and at Stanford. He has conducted extensive cross-cultural research, comparing communication processes in Chinese and American samples.

WAYNE DANIELSON is dean of the School of Communication of the University of Texas at Austin. He received his Ph.D. from Stanford in 1957, taught at the Universities of Wisconsin and North Carolina (where he became dean of the School of Journalism) before moving to Texas in 1969. He collaborated with Paul Deutschmann on a landmark study of diffusion of news information, and in recent years has concentrated his research interests largely in the area of applying new communication technologies to news processing and education for journalism. He was president of the Association for Education in Journalism in 1970-71.

STEVEN H. CHAFFEE is Willard G. Bleyer Professor of Journalism and Mass Communication at the University of Wisconsin in Madison, where he has taught since receiving his Ph.D. from Stanford in 1965. He was assisted in editing this monograph by Albert Tims.

Contents

BEST COPY AVAILABLE

The Pathways of Proteus, *Steven H. Chaffee* 1

Mass Media and Education:
The Schramm Connection, *Jack Lyle* 9

Communication and National Development:
The Contributions of Wilbur Schramm,
Godwin C. Chu 17

Wilbur Schramm and the Unreachable Stars:
The Technological Papers, *Wayne Danielson* 24

Curriculum Vita: WILBUR SCHRAMM 30

WILBUR SCHRAMM: An Incomplete Bibliography 33

(Prior Publication)

Preface

BEST COPY AVAILABLE

At the convention of the Association for Education in Journalism at Fort Collins, Colorado in August 1973, the Paul J. Deutschmann award for outstanding contributions to mass communication research was presented to Dr. Wilbur Schramm of Stanford University. This award, which is made by the AEJ Elected Standing Committee on Research, is not lightly given. In the dozen years since the untimely death of Professor Deutschmann, director of the Communications Research Center at Michigan State University, previous awards have gone only to Chilton R. (Chick) Bush of Stanford in 1969, and to Ralph O. Nafziger of the University of Wisconsin in 1972.

For the occasion of presenting the award to Professor Schramm, the Research Committee organized a symposium of papers by three of his students and colleagues, analyzing the contributions of their mentor to three of the many fields of inquiry in which he has been a pioneer and in which these students have become nationally and internationally recognized leaders. This monograph contains those addresses, by Jack Lyle, Godwin Chu and Wayne Danielson. We have also incorporated here some biographical material on Professor Schramm, who in 1973 reached mandatory retirement age at Stanford, and has moved on to a new job as director of the Communication Institute of the East-West Center in Honolulu, Hawaii.

We have also appended to the monograph a summary curriculum vita describing the career of Wilbur Schramm and a partial bibliography. This is, admittedly, not the usual type of material for scholarly publication. But in this instance it seems more than justified; the remarkable achievements of this prolific scholar, writer and teacher demonstrate that there is indeed such a field as mass communication research, and that in it one can attain greatness in the stringent terms by which academic excel-

BEST COPY AVAILABLE

lence is assessed. All of us can learn something—may I suggest humility—by reading even the bare facts of the professional life of our field's outstanding figure.

It is usual to judge professors by books and articles written, consultantships and offices held, and honors received. By all these "on paper" criteria, Schramm towers above our field. But the essential judgment to be made is in human terms: the extensions of the man through his colleagues and students who have worked with and under him. It would not do here to attempt to list all those who have benefitted from their associations with Wilbur Schramm over the years. There are too many, and they include those who have learned from his writings without ever having worked personally with the man. But it is worth noting that all of us who were on the podium for the presentation at Fort Collins—including Prof. Maxwell E. McCombs, who presided as chairman of the Research Committee; Lyle, Chu and Danielson; and the late Paul Deutschmann himself—had been graduate students of Schramm's. This monograph, then, is more than recognition of an award. It is an expression of gratitude.

S. H. C.

Madison, Wis.
July 1974

The Pathways of Proteus

By Steven H. Chaffee

BEST COPY AVAILABLE

In March of 1933 there appeared in the *Bibliography of Modern Language* an article entitled, "The Cost of Books in Chaucer's Time."[1] It was written by a young English professor at the University of Iowa, a former newspaper reporter and sometime musician named Wilbur Schramm. It dealt with what today would be called the "mass media market" of medieval England, and the way in which economic factors helped determine the kinds of stories Chaucer wrote. One's imagination need not stretch to call this an instance of "mass communication research" of the "behavioral" persuasion. It may be the earliest piece of such research on record. If it is not, it is certainly the earliest contribution by anyone who is still in the mass communication research business more than four decades later.

It is tempting to refer to these 40-odd years as the Age of Schramm. Certainly no other individual has done nearly so much to generate, collate and synthesize knowledge in this new field of inquiry. But the premier historian of psychology, Edwin G. Boring, warns us against attributing the growth of knowledge in any era simply to a great man.[2] It is instead, he argues, the *zeitgeist* which is available to all investigators, and the paradigms that guide their studies, to which the credit should go—not to individuals who make use of that *zeitgeist* or who refine those paradigms. Fair enough. Let's not claim that Schramm built the *zeitgeist* of this field, or designed its most useful paradigms (although it is not at all clear that he did not). It is enough to recognize that he has been—and continues to be—the principal disseminator of that *zeitgeist*, those paradigms and the knowledge yielded by mass communication research.

1 *Bibliography of Modern Language* 48: 139-45, March 1933.

2 "Eponym as Placebo," address to the 17th International Congress of Psychology, Washington, D.C. 1963. In Boring, *History, Psychology, and Science* (New York: Wiley, 1963), pp. 5-25.

BEST COPY AVAILABLE

The central assumption of communication studies is that the extent to which the parts of a social system interact with one another is *variable*, and that this variance—which governs the productive "output" of the system—can be attributed to the efforts of *communicators*. These may be devices, such as the mass media, or they may be exceptionally motivated individuals, such as Schramm. This determination to communicate about communication has taken Wilbur Schramm down many paths, and into many professional lives, since 1932 when he completed his dissertation at Iowa on the topic, "Hiawatha and Its Predecessors." The trail of knowledge and ideas he has left constitute little short of a comprehensive map of this broad and expanding field.

In the papers that make up this monograph, three of Schramm's fondest areas of investigation are reviewed. Jack Lyle looks at the integration of mass communication into the field of education. Godwin Chu examines the nascent role of the media in national development. And Wayne Danielson deals with the social and technical adoption of new communication technologies. In each of these areas, Schramm saw the possibilities early, did the hard work of organizing basic concepts and research groups, trained his students to become leading specialists (as these three authors are), and has continued himself to make original and seminal contributions.

Three such fields should be enough to encompass the contributions of any scholar-scientist. But in this case they are not. In ancient mythology, Neptune's herdsman was a wise old fellow named Proteus, who was able to escape harm by continually changing his shape. The image does not fit well, because it is impossible to think of Schramm as someone's herdsman, as old, or as seeking escape from anything. But there is a protean quality to his career that deserves our reflection here, before the reader turns to the three papers themselves. The constant movement into new pathways of investigation is itself instructive when one attempts to comprehend how anyone could have accomplished so much.

The article on Chaucer mentioned earlier would not be counted as "scientific" by today's standards. But within a year Schramm had published one that clearly would be so described. Using a "phonophotographic apparatus" (for details of which

BEST COPY AVAILABLE

the reader is cheerfully referred to the original article), he and Carl E. Seashore measured physiological reactions to reading English tetrameter verse.[3] The main variables of interest were "time" and "intensity." They found, among other things, that time is more often the determinant of metre than is intensity, and that accented syllables are on the average about twice as long as unaccented syllables. This began a series of collaborative studies between Schramm and Seashore, although as an English professor Schramm also continued to contribute pieces to such outlets as the *Bibliography of American Literature*, the *Virginia Quarterly Review*, *Literary Scholarship* and the *Saturday Review of Literature* on other topics.

From 1935 to 1944 he edited a journal of critical and imaginative writing, *American Prefaces*, and in off-hours wrote tall tales for the *Saturday Evening Post* (see footnote 1 in the Lyle article, plus several references by Danielson to Schramm's fictional characters). The titles are given in the bibliography. He founded the Iowa Writers Workshop, working with the novelist Wallace Stegner, another Iowan who would eventually come to Stanford also.

World War II took Schramm into the U.S. Office of War Information for two years, after which he returned to Iowa to become director of the School of Journalism. In 1947 he moved to the University of Illinois, where he headed the University Press and founded the Institute of Communications Research. It was in this period that Schramm's long-standing interest in behavioral studies of communication phenomena, and his early stimulation by such thinkers as the philosopher Alfred North Whitehead at Harvard and social psychologist Kurt Lewin at Iowa, coalesced with the need he saw for a scientific field of communication. As director of the University of Illinois Press, he persuaded Claude E. Shannon of Bell System Laboratories and Warren Weaver of the Rockefeller Foundation to publish collaboratively *The Mathematical Theory of Communication*.[4] This became the basic document of what is now called Information Theory, a topic which Schramm himself was later to intro-

[3] Seashore and Schramm, "Time and Intensity in English Tetrameter Verse," *Philological Quarterly*, 13:65-73 (January 1934).

[4] Urbana: University of Illinois Press, 1949.

BEST COPY AVAILABLE

duce most coherently to mass communication researchers.[5] Schramm's transliteration of the Shannon-Weaver transmission model (source-encoder-signal-decoder-destination) became one of the two most pervasive conceptual paradigms governing research and discourse on mass communication.

The other dominant paradigm in the field was a combination of motivational and learning theory from psychology. Here again, Schramm played the roles of synthesizer, explainer and disseminator. In a widely cited *Journalism Quarterly* article, he defined "news" for a generation of budding journalists in these terms:

> I think it is self-evident that a person selects news in expectation of a reward.
>
> This reward may be either of two kinds. One is related to what Freud calls the Pleasure Principle, the other to what he calls the Reality Principle. For want of better names, we shall call these two classes *immediate reward* and *delayed reward*.
>
> In general, the kinds of news which may be expected to furnish immediate reward are news of crime and corruption, accidents and disasters, sports and recreation, social events, and human interest.
>
> Delayed reward may be expected from news of public affairs, economic matters, social problems, science, education, and health.[6]

There is a moralistic, as well as a scientific, cast to this terminology. This evaluative dualism about people's uses of the mass media was echoed a dozen years later when he characterized children who spent a lot of time with television as "fantasy-oriented," and those who did a lot of reading as "reality-oriented."[7] Humanistic value judgments were intermixed with social-scientific description in other works as well. In his ethical treatise *Responsibility in Mass Communication*, one can discern a touch of ethnocentrism:

> . . . our popular art . . . refuses to deal, except in rare cases indeed, with the more profound and moving experiences of man. . . . Do

[5] "Information Theory and Mass Communication," *Journalism Quarterly*, 32:131-46, 1955. Schramm, "How Communication Works," in Schramm (ed.), *The Process and Effects of Mass Communication* (Urbana: University of Illinois Press, 1954), pp. 3-26.

[6] "The Nature of News," *Journalism Quarterly*, 26:259-69, 1949.

[7] Schramm, Jack Lyle and Edwin B. Parker, *Television in the Lives of Our Children* (Stanford: Stanford University Press, 1961).

BEST COPY AVAILABLE

the insights which emerge from it really make better men, a greater respect for morality, and a more Christian world?[8]

Even in his gap-bridging comparison of the American and Soviet-Communist press systems, Schramm assumed that it boiled down to a dualistic contrast:

> To Soviet observers, our media are . . . irresponsible and disorderly. To us, the Soviet mass media are "kept" and "servile." To the Soviets, the multidirectional quality, the openness, the unchecked criticism and conflict in our media represent a weakness in our national armor. To us, they seem our greatest strength. The next few decades will tell which is the better estimate.[9]

These examples of interpreting mass communication behavior in terms almost of "good guys" and "bad guys" must be seen in the context of their time. In the 1960s and 1970s, Schramm was in the vanguard of those who came to adopt a more detached, descriptive and relativistic approach to the analysis of people's communication problems. As he worked with many nations and interest groups who were attempting to cope with the new media, especially in two critical fields of human "development"—child growth, and the modernization of Third World nations—his analyses became, paradoxically, more humanistic even as they became more scientific in the sense of emanating from hard empirical data. As he saw so early and clearly, the new media do not transform society so much as they simply provide modern society with *different means* for accomplishing things that in traditional societies had been institutionalized in such roles as the watchman, the tribal elders and the balladeer.[10] Not surprisingly, the capacity for sensitive interpretation of "research findings" is at its height when he analyzes both the social and the emotional meaning of a tragic event that strikes him with a deep feeling of personal loss, as in this accounting of the assassination of President John F. Kennedy:

[8] New York: Harper and Row, 1957, p. 305.

[9] "The Soviet Communist Theory of the Press," in Fred S. Siebert, Theodore Peterson and Schramm, *Four Theories of the Press* (Urbana: University of Illinois Press, 1956), pp. 105-46.

[10] "The Nature of Communication between Humans," in Schramm and Donald Roberts (eds.), *The Process and Effects of Mass Communication, Rev. Ed.* (Urbana: University of Illinois Press, 1971), pp. 3-53.

BEST COPY AVAILABLE

The experiences of 150 million Americans before their television sets during the dark weekend, then, were a sharing of common information, a reassertion of national norms, and a national act of mourning which must have been for many viewers a catharsis of grief. When the experience is seen in this way, it is somewhat easier to understand why the experience was so largely grief rather than anxiety, why Americans closed the book on an anxiety over conspiracy more quickly than Europeans did, and why the recovery after the weekend of grief came so comparatively soon, with elements of rededication and reintegration rather than divisiveness and disquiet. To sum up, it appears that the essential elements in this response were the enormous flow of news and the enormous focus of attention on television sets that at times could have been described as a truly national act involving most of a major's nation's citizens.[11]

The two major themes of the most recent quarter-century of Schramm's career have been the building of a research field and the transition in his international interests from a cold-warrior perspective to the role of an empathetic co-worker in the struggle for modernization of the developing countries. A few milestones suffice to mark each path here.

Schramm himself attributes the development of social research on mass communication to Kurt Lewin, Paul Lazarsfeld, Harold Lasswell and Carl Hovland.[12] But the field did not exist in the sense of courses and curricula until it had a textbook, which Schramm gave it in 1950 with the compilation of *Mass Communications*. This reader, dedicated to Lazarsfeld, Lasswell and Hovland, collected in one place for the first time the seminal works of these and other scholars--including such diverse sources as the sociologist Robert Park, the early Walter Lippmann, semanticist Wendell Johnson and readability's Rudolf Flesch.[13] A few years later, at the request of the U.S. Information Agency, he put together a second reader, this one angled more toward international communication and psychological principles of

[11] "Communication in Crisis," in Bradley S. Greenberg and Edwin B. Parker (eds.), *The Kennedy Assassination and the American Public* (Stanford: Stanford University Press, 1965).

[12] "Communication Research in the United States," in Schramm (ed.), *The Science of Human Communication* (New York: Basic Books, 1963), pp. 1-16.

[13] Urbana: University of Illinois Press, 1949.

BEST COPY AVAILABLE

persuasion. It was the enormously influential *Process and Effects of Mass Communication*, which at many schools became the textbook for a new course, communication theory.[14] In 1957 *Responsibility in Mass Communication* emerged, sponsored by the National Council of Churches of Christ, and provided a synthesizing text for budding courses in "ethics," "responsibility" and "mass communications and society."[15] A few years later a new edition of *Mass Communications* was issued, literally in response to popular demand of journalism professors across the country.[16] For Voice of America he edited a series of brief pieces by leading communication scientists, which were broadcast to eastern Europe and published as *The Science of Human Communication*.[17] Revised versions of *Process and Effects* (co-authored with Donald Roberts)[18] and *Responsibility* (with William Rivers)[19] followed, plus the massive *Handbook of Communication* (with Ithiel de Sola Pool and others).[20] These are not merely books. They define the boundaries and the substance of the field for many purposes. And to say that they were "edited" by Schramm is to grossly understate the contribution. Nothing like them had existed before. They were conceived by him, in all their richness and breadth, and his introductory essays (e.g. "How Communication Works"[21]) often turned out to be the sections most carefully read and often cited among students of the field.

In the international sphere, the path has been less direct. Schramm started down the cold-war trail at least as early as 1951, with *The Reds Take a City*, a Korean War study that has been republished in many languages.[22] He tried comparative mass

[14] *Supra*, Note 5.

[15] *Supra*, Note 8.

[16] Second edition, University of Illinois Press, 1960.

[17] *Supra*, Note 12.

[18] *Supra*, Note 10.

[19] Revised edition, Harper and Row, 1969.

[20] Pool, Schramm, Frederick W. Frey, Nathan Maccoby and Edwin B. Parker, *Handbook of Communication* (Chicago: Rand McNally, 1973), 1011 pages.

[21] *Supra*, Note 5.

[22] In addition to the book, published in 1951, see Schramm and John W. Riley, "Communication in the Sovietized State as Represented in Korea," *American Sociological Review*, 16:757-66, 1951.

BEST COPY AVAILABLE

media performance analysis in the prize-winning *One Day in the World's Press,* a collection of many newspapers' handling of the 1956 invasion of Hungary.[23] But neither international propaganda nor comparative media studies turned out to be the most fruitful path. Instead, from the time he left Illinois for Stanford in 1955, Schramm's career has persistently become more consumed with the problems of developing nations. This manifested itself in the UNESCO book *Mass Media and National Development* in 1964, and the symposium *Communication and Change in the Developing Countries* (co-edited with Daniel Lerner) in 1967.[24] These, too, have become popular texts and reference materials for yet another kind of course that has appeared at many campuses in recent years. The intellectual fruits of this effort are carefully analyzed in the paper by Chu in this monograph.

It is the devotion to international understanding, and to Third World development, that have finally drawn Wilbur Schramm to the East-West Center in Hawaii. His specific goal there, expressed in a note to this author when he left Stanford, is "to build one more institution." His reference is to the East-West Communication Institute, of which he is director. But as Schramm meanders along the many pathways that he knows so well—so much better than the rest of us—he continues to build many institutions, not just one. In early 1974 the East-West Center was the site of a conference devoted to planning communication research institutes in Asian countries. Schramm and Y. V. L. Rao of the Asian Mass Communication Research and Information Centre (AMIC) presided. Delegates included social scientists from more than a dozen Asian nations, and all of the contributors to this monograph, among others. And so we too could experience what it feels like to be led down a new pathway by a master traveler.

[23] Stanford University Press, 1959.

[24] Schramm, *Mass Media and National Development* (Stanford: Stanford University Press and UNESCO, 1964); Lerner and Schramm, *Communication and Change in the Developing Countries* (Honolulu: East-West Center Press, 1967).

Mass Media and Education: The Schramm Connection

By Jack Lyle

BEST COPY AVAILABLE

There was a celebrated horse that played third base for Brooklyn, back in the days when the Dodgers were in Flatbush rather than Los Angeles.[1] That horse could do just about anything. And no wonder. He was one of a series of delightful creations given to us by a man who can do just about everything: Wilbur Lang Schramm.

The horse was a natural ballplayer. But if Schramm were writing the story today instead of three decades ago, the horse might be picking up pointers by watching ball games on television.

Mass media and education: few persons have done more to bracket these two than Schramm, so I have chosen to call it "The Schramm Connection." Actually, that is presumptuous because there are many Schramm "connections," as Wayne Danielson and Godwin Chu point out in their papers here.

It may seem a little out of character when applied to a simple boy from Marietta, Ohio, but if there is one word to describe Schramm it is "awesome." It applied when I was his student at Stanford and I find it even more appropriate today as a colleague.

Schramm is awesome because of the scope he constantly

[1] Schramm's media experience included some years of writing tall tales that appeared as short stories in mass circulation magazines, as a means of augmenting a depression-era University of Iowa professor's salary. There are several references in the Lyle and Danielson papers here to characters in these stories. In this case, the horse's name was Jones, a promising rookie who fled the team before the season began. ("Who would stay in Brooklyn if he could run?") The story, "My Kingdom for Jones," appeared in the *Saturday Evening Post* in 1944, and is reprinted in Charles Einstein, *The Fireside Book of Baseball* (New York: Simon and Schuster, 1956), pp. 287-93. It possesses no redeeming social value. (*Ed.*)

BEST COPY AVAILABLE

exhibits, not just in his interests but in his activities and expertise, his ability to probe, pull together, synthesize and extrapolate. Most enviable is his skill in expressing even the most complicated concepts in beautifully simple writing. Everybody who has ever watched him sit down at the electric typewriter and then read unedited what comes out of it has gone away awestruck.

At the risk of embarrassing him, these rather extreme but totally sincere remarks are a necessary prelude to explaining this particular Schramm connection, this bracketing of media and education.

Schramm is in love with the world. To him the world is a wonderful place, full of excitement. It is exciting because it is diverse and ever changing. Thus it offers a never ending series of new opportunities to learn. And to Schramm there are few joys which equal the joy of learning. Because he finds so much joy in learning, he wants to share that joy.

In the awesomely long and varied bibliography of his writings, perhaps the most unusual book is *Classroom Out-of-Doors.*[2] He told us that doing that book was fun. Enjoyment shines through his writing: the enjoyment of watching young people become acquainted with the world of nature, of sharing their excitement, their joy of discovery. In that instance the learning did not entail the use of mass media, but it did entail educational innovation.

While most of his published thoughts and findings on media and education deal with instructional programs, he has always recognized that mass media are educational forces within the society, that their informal, day-to-day use produces learning. Thus, for example, in our data collection for *Television in the Lives of Our Children,*[3] Schramm included attempts to document the impact of television viewing in widening the child's horizons and knowledge of the world about him. *The People Look at Educational Television*[4] expanded this inquiry to the adult population.

[2] *Classroom Out-of-doors: Education Through School Camping* (Kalamazoo, Mich.: Sequoia Press/Publishers, 1969).

[3] Schramm, Jack Lyle and Edwin B. Parker, *Television in the Lives of Our Children* (Stanford: Stanford University Press, 1961).

[4] Schramm, Jack Lyle and Ithiel de Sola Pool, *The People Look at Educational Television* (Stanford: Stanford University Press, 1963).

BEST COPY AVAILABLE

How did this Schramm connection come about?

Schramm's is a fascinating career. Scholar and teacher; researcher and philosopher; journalist, prize-winning author of social science as well as of fiction, publisher and press director; multi-threat athlete; aviator; flutist and bellows-boy for the church organ—*et cetera ad infinitum*. With such a wealth of talent, it is not surprising that he had many choices to make. But rather than making a choice and following one road, Schramm has been able to make his choices converge.

Perhaps nowhere is this more apparent than in the Schramm connection of media and education. He has always been interested in methodology, but he has always been more interested in methodology as a means of solving problems. He was a researcher and a philosopher, but he has always been oriented to action, eager to bridge the gap between experimentation and practical utilization.

Exactly where or when Schramm focused his interest on the educational potential of the media is not clear. The early phases of his career and early writings don't give much help. There was one critical time during World War II when he worked with the Office of War Information, where he shared a carpool with Margaret Mead and others pioneering in the use and testing of the media for training and attitude modification.

Certainly his association with Charles Osgood in the establishment of the communications program at the University of Illinois must have helped consolidate his interest. *Process and Effects of Mass Communication*[5] appeared the year he moved to Stanford, but it was written during his tenure at Champaign-Urbana. It may be significant that his introductory chapter advanced the discussion of communication models to include an Osgood model drawn from stimulus-response learning paradigms.[6] In his seminar on communication theory at that time he put primary emphasis, not on the mechanical models of the information theorists, but on the human models of the learning theorists.

It was in this period (he moved to Palo Alto in 1955) that I

[5] Schramm, ed., *Process and Effects of Mass Communication* (Urbana: University of Illinois Press, 1954).

[6] "How Communication Works," in *Process and Effects, ibid.*, 1954, pp. 3-26.

BEST COPY AVAILABLE

came under the Schramm spell. At the risk of sentimental romanticizing, in those years there was an excitement about communication theory and research which is rarely felt today. It was the same *esprit*, eagerness and confidence that led to the formation of the infamous "rump sessions" at AEJ.[7]

In rapid succession came such landmark books as *The Measurement of Meaning*,[8] *Personal Influence*, *A Theory of Cognitive Dissonance*[9] and the series of volumes from Hovland's group at Yale.[10] Everything seemed possible in those optimistic days, even general theories.

But as time went on, it turned out that things were more complex and tougher than we had thought. The contending theories did not converge. The excitement chilled. The parallel introductory chapters to the first and revised editions of PEMC (as *Process and Effects of Mass Communication* always appeared on Stanford reading lists) convey this. In the revision[11] Schramm

[7] Reference is to a series of informal meetings just before or just after the AEJ annual meetings, the first at Boulder, Colo., in 1955, where theory and methodology in mass communication was the sole topic for discussion.

[8] Charles Osgood, Percy Tannenbaum and George Suci, *The Measurement of Meaning* (Urbana: University of Illinois Press, 1957). Schramm was director of the Institute of Communications Research at Illinois when Osgood's program of research on the semantic differential was initiated. For a recent summary of the cross-cultural work that has grown out of this effort, see Osgood, "Probing Subjective Culture/Part 1: Cross-linguistic Tool-making," *Journal of Communication*, 24:21-35 (1974).

[9] Elihu Katz and Paul Lazarsfeld, *Personal Influence* (Glencoe: Free Press, 1955); Leon Festinger, *A Theory of Cognitive Dissonance* (Stanford: Stanford University Press, 1957).

[10] The Yale series on attitude change grew out of the World War II volume, Carl Hovland, Arthur Lumsdaine and Fred Sheffield, *Experiments on Mass Communication* (Princeton: Princeton University Press, 1949). The research program was extended in Hovland, Irving Janis and Harold Kelley, *Communication and Persuasion* (New Haven: Yale University Press, 1953). This and subsequent research under the editorship of Hovland and Janis is summarized in Nathan Maccoby, "The New Scientific Rhetoric," in Schramm (editor), *The Science of Human Communication* (New York: Basic Books, 1963).

[11] Schramm, "The Nature of Communication between Humans," in Schramm and Donald Roberts (editors), *Process and Effects of Mass Communication*, Revised Edition (Urbana: University of Illinois Press, 1971), pp. 3-53.

BEST COPY AVAILABLE

gives an interesting and useful historical commentary on the continuing attempts at creating communication theory and models. It is more subdued, less provocative than its first edition counterpart.

Yet if the glow of excitement and optimism faded for many of us, it has continued to burn for Schramm. Many of the other leaders lost interest in communication, turned to other areas or became specialists. Today some of the elders grumble that it has all come to naught. Most of us who were students then have specialized. This probably was inevitable as the field developed and became more complex, making it more difficult to be a generalist with a global view than it was back in the early 1950s.

But at least one person has had both the intellectual breadth and perseverance to be just that. This is well illustrated by the Schramm connection of media and education.

One of the things Schramm brought with him to Stanford in 1955 was a set of *Communication Abstracts,* a very useful review of the literature pertinent to communication. It had been done under a contract from the Navy, a logical continuation of the type of activity which had been supported by the Armed Forces during World War II and which had led to *Experiments on Mass Communication.*

After Sputnik, however, funds for research and development of educational technology increasingly became available from the Office of Education. The late 1950s and the 1960s constituted a period of great research activity on the utilization of mass media for education. Since this period coincided with the advent of television and computers, much of it focused on the introduction of television and later computer hardware into the educational establishment. (It must also be admitted that many of these studies used education as a pretext to get money to support researchers whose interests in reality lay elsewhere.)

Schramm immediately became a leader in research on educational utilization of media. His leadership was bolstered, no doubt, by the fact that he was sincerely interested in the educational process, true to those humanistic instincts apparent in his beginnings. His interest centered, as it still does, not on the hardware or the process but on what happens to the individuals involved, on the expansion of opportunities for others to share his excitement in learning.

BEST COPY AVAILABLE

For him, technology and change should be introduced, not for their own sake, but to make learning more widely available, more exciting and, above all, more effective for students, young and old, in and out of school.

Although most of his activities in this area have involved television, he has never been an "educational television man." Rather, he is an educational media man, always remembering the potential of older media, always alert to the potentialities of new media.

He sought cross-fertilization with educators, entering into a highly fruitful association with the faculty and graduate students of Stanford's School of Education, particularly with the late William Odell.[12] It is noteworthy that the students who completed their doctorates in this program (also receiving a tempering under Richard F. Carter), most frequently became administrators and planners—decision makers, not educational technologists.

Schramm has been instrumental in a series of important projects experimenting with, testing and evaluating educational media programs. The Stanford-Denver project to introduce Spanish into the elementary schools via television was funded by the Office of Education. Under the supervision of John Hayman, this project extended over several years and was a model for research and development in connection with innovation in educational media. The Colombia Peace Corps evaluation program, sponsored by the US AID and carried out by Nathan Maccoby and George Comstock, provided multiple measures on the impact of an ambitious nation-wide effort in instructional television involving Peace Corps Volunteers and students and teachers in Colombia's elementary schools.

In the mid-1960s Schramm was instrumental in developing a realistic appraisal of educational media programs, working with Guy Beviniste and Phillip Coombs, both then connected with the International Institute for Educational Planning. The result was a world-wide survey of educational media programs, a project with which I had the great good fortune to be associated. This project produced what is probably the most honest assess-

[12] Richard F. Carter and William R. Odell, *The Structure and Process of School-Community Relations: A Summary* (Stanford: Institute for Communication Research and School of Education, 1966).

BEST COPY AVAILABLE

ment of media and education in the literature—*The New Media: Memo to Educational Planners*, and three volumes of case studies.[13] Published by UNESCO, these books combined exciting vistas of the potential of media for widening educational opportunity with a hard-nosed and realistic appraisal of problems and costs. They provided educational planners for the first time with objective criteria to use in making decisions concerning the possible introduction of educational media.

A few years later, Schramm and Godwin Chu pulled together the world-wide literature containing evidence for instructional television's effectiveness in *Learning From Television: What the Research Says*.[14] In it the point is made that

> . . . it has become clear that there is no longer any reason to raise the question whether instructional television can serve as an efficient tool of learning. This is not to say that it always *does*. But the evidence is now overwhelming that it *can*, and, under favorable circumstances does. . . . (original stress.)
>
> . . . The question of whether the situation calls for instructional television is one that has to be answered in terms of need, availabilities, and alternatives (p. 98).

No one else has done so much to explore the potentials of mass media for instruction, and especially to rationalize the use of mass media in education. Schramm's primary interest, as always, was in promoting effective education, not media utilization *per se*. This work led to the El Salvador project, another US AID-supported effort, in which Schramm and his colleagues, Emile McAnany and John Mayo, provided continuing R&D support to an otherwise indigenous effort. It has become a model for similar collaboration world-wide.[15]

The work goes on. We can look forward to an even more exciting, certainly more exotic, report on the Samoan ITV program.[16] Of still greater importance, Schramm is busy compiling

[13] Schramm, Coombs, F. Kahnert and Lyle, *The New Media: Memo to Education Planners* (Paris: UNESCO, 1967).

[14] Stanford University: Institute for Communication Research, 1967.

[15] Schramm, *Instructional Television in the Educational Reform of El Salvador* (Washington, D.C.: Academy for Educational Development, 1972).

[16] Schramm, "ITV in American Samoa—After Nine Years," Stanford: Institute for Communication Research, 1973.

BEST COPY AVAILABLE

data to expand the work begun in *The New Media*. This will provide, among other things, a more comprehensive investigation on cost effectiveness of media programs.

General theory may not have come to fruition for us back in the 1950s and early '60s, but systems analysis has proven a very effective approach to considering educational use of media. Schramm continues in the vanguard of those who preach the gospel, but he is also providing practical examples and models to help those responsible for education to open new educational channels to more people through mass media inputs.

This paper began with the baseball-playing horse. It closes with another Schramm character, Windwagon Smith, who amazed his companions by sweeping across the plains in his wagon without horses.[17] Wilbur amazes us as he sweeps across the skies. With the aid of jet planes, he, like Windwagon, covers a lot of territory.

The multiple letterman of Marietta College is still an athlete. And the scholar of Harvard and Iowa is still encountering decision points—and finding new connections.

[17] Schramm, "Windwagon Smith," *Atlantic*, 168:25-35 (1941). Later this became the lead article in a collection of tall tales, *Windwagon Smith and Other Yarns*, which won the O. Henry Prize, given by Doubleday and Co. for achievement in writing short stories, in 1942. A cartoon film version is still occasionally shown in Walt Disney television productions.

BEST COPY AVAILABLE

Communication and Development: Schramm's Contributions

By Godwin C. Chu

When future historians evaluate the years after World War II, will the trips to the moon prove to have had greater impact on human life than the world-wide movement of national development? India was the first to set an example in 1947. Soon afterwards, colonies and semi-colonies in Asia, Africa, the Middle East and Latin America began to free themselves from the bondage of their European masters. For a while the task of developing these new lands was considered to be primarily one of economics once political independence was won. Since then the idea that communication plays a key role in national development has gained general acceptance, a view that is largely attributable to the work of the man we are honoring in this symposium.

That an emerging country should want to invest a considerable amount of its scarce resources in the development of communication media in order to accelerate economic and social development must have sounded odd at first. But when we consider national development not just in terms of an increase in gross national product but as an ongoing process of social transformation involving change in economic and social structures, then communication development should be a major concern. As Professor Schramm has suggested, "the structure of social communication reflects the structure and development of society."[1]

To elaborate on this point:

As nations move from the patterns of traditional society toward the patterns of modern industrial society, spectacular developments take

[1] "Communication Development and the Development Process," in Lucian W. Pye (ed.), *Communications and Political Development* (Princeton University Press), 1963, p. 34.

BEST COPY AVAILABLE

place in their communication. From one point of view, developments in communication are brought about by the economic, social, and political evolution which is part of the national growth. From another view point, however, they are among the chief makers and movers of that evolution.[2]

This passage is a keynote to Schramm's conceptualization of the interaction between communication and national development.

Before presenting the major concepts of Professor Schramm's theoretical framework, however, a brief review of the trend of research in communication and national development is in order. Research in this field may be characterized by the nature of its independent and dependent variables—whether they are individually or structurally oriented. Most of the research employs some individual traits or behavioral characteristics as both the independent and dependent variables, for instance, where we are testing whether individuals who read newspapers or listen to the radio tend to have less traditional attitudes. A few studies have used structural features; for example, the existence of some organizational characteristic in the community, as the independent variable is used to predict individual traits or behavior as the dependent variable. A few other investigators have observed individual use of mass communication as an independent variable and examined its impact on the social structure as a dependent variable.

Schramm's major concern appears to be different from these. In his conceptualization, both the independent and dependent variables are structural features, rather than individual traits or behavior. Using a systems approach, he has conceptualized a society to be a boundary-maintaining set of interdependent components:

> By interdependence we mean a relationship of parts in which anything happening to one component of a system affects, no matter how slightly, the balance and relationship of the whole system. By boundary-maintaining we mean a state in which the components are so related that it is possible to tell where the system ends and its environment begins.[3]

[2] *Ibid.*, p. 30.
[3] *Ibid.*

BEST COPY AVAILABLE

Following this approach, Schramm is essentially interested in the intertwining structural relations among the various components. In this sense, the interdependence of communication and national development becomes, conceptually speaking, a question of how the communication system and the economic, political and social structure will be related to each other as a nation goes through the complex process of social change generally referred to as national development. Indeed this interrelation is so intimate, as Professor Schramm has emphasized again and again, both in his writings and in his classes, that we could regard economic, social and political evolution as changes in communication structure. This concept becomes clear when we realize that the economic, social and political evolution involved in the process of national development will necessitate not only a higher degree of role specification and differentiation, but also a new structure of role relations, and thus new patterns of communication channels.

A person contented to play the role of a detached observer would probably limit himself to a theoretical framework of this nature, and see how a particular boundary-maintaining social system would adapt and adjust to changes in some of its major structural components due to the introduction of mass communication. Professor Schramm is more than a detached observer. From his writings and his lectures, one cannot but sense the warm concern he has for the millions of people in Asia, Africa, the Middle East and Latin America. To him, these are not just subjects to be observed or cases to be entered for statistical analysis. They are people, and he has met many of them, joined in their conversations and shared their problems. These are people whom he has related to on a personal basis, people whom he wants to help. Thus, in addition to his theoretical conceptualization of the interrelationship of communication and national development, Professor Schramm has been occupied in the last ten years or so with a problem of a more practical nature: what can we do about communication development in order to accelerate the process of economic growth and social development?

Turning his attention to the economic aspect, which perhaps affects people most directly, Professor Schramm proposes a number of conditions that must be met before economic develop-

BEST COPY AVAILABLE

ment can take place. If communication is to contribute to the process of economic growth, it must be used to facilitate the fulfilment of certain functional requisites.

Some of the functional requisites relate to cognitive changes. First, he has suggested, there must be a feeling of nationhood, without which no nation can pierce the economic barrier. There must be willingness to defer gratifications until the nation as a whole can afford them. In other words, there must be acceptance of group or national goals over and above some individual goals. There must be understanding on the part of the people as to why they are making an effort. There must be a feeling that they have a part in determining what shall be done. And the acquisition of new skills and knowledge are necessary for economic development.

Other functional requisites for economic development appear to be structural in nature. There must be an extension of the effective market to accommodate economic development. New roles must be the designated and accepted and with them new responsibilities and new role relations.

Conceptually, there seems to be little doubt that communication development not only can accelerate the pace of economic growth, but is actually essential to economic development. As Schramm has suggested:

> As economic activity spreads throughout the system, the act of balancing and sharing the strain becomes more delicate; it requires quicker reports from farther away and quicker orders to more scattered centers. Components must be in touch. The same kind of understandings, the same bases for cooperation, which have existed among a few must be made to exist among many. Knowledge must be gathered more broadly and shared more widely. Information must be transmitted more swiftly, not only for the period of the five-year plan or even for the period of great economic development, but permanently—because the national system is moving toward a level of functioning that will always require wide and swift communication. Thus the developing nation must be prepared to support an enormous increase in the day-to-day communication within the system.[4]

Empirically, however, this condition of communication de-

[4] *Ibid.*, p. 43.

BEST COPY AVAILABLE

velopment cannot readily be achieved. Much of Schramm's effort in the last decade has been directed toward the search for answers to this question. We can perhaps appreciate the enormity of the difficulties involved when we realize that, while economic development depends on communication development, the kind of communication development we would like to see depends upon an adequate basis in economic development. Without the material support of equipment and supplies, without the managerial support of qualified personnel and without the financial support of advertising income and a sizable, literate readership, such communication development would be impossible. In this sense, economic development, education, urbanization and communication development all become closely intertwined. As Professor Schramm has observed, we have to expect a nation to pull itself up painfully, inch by inch, by its own bootstraps.

With this arduous process in mind, Professor Schramm does not assume any particular order or sequence in which aspects of development may be expected to take place. In fact, the research evidence we have today casts considerable doubt as to whether there is one universally applicable development sequence for the transformation of traditional societies. Rather, it seems that whether one aspect of development should precede another depends on the social structure and cultural background of the nation in question.

Similarly, Professor Schramm does not advocate any one particular strategy for using communication to promote national development. Rather he emphasizes the importance of cultural fit when one designs a development program using the various media of mass communication and interpersonal communication. Depending on the task required, the audience to be reached and the resources available, the Big Media are not necessarily preferable to the Little Media. And regardless of the kinds of media employed, group processes must not be ignored.

Professor Schramm's awareness that the road to national development may veer off in a number of directions does not imply, however, that he lacks a system of priorities as to how communication media may be most effectively utilized. Schramm has suggested, rather convincingly, that mass media can be used to widen horizons, raise aspirations, focus attention, create a climate for

BEST COPY AVAILABLE

development and feed the interpersonal channels. But above all, he has been most actively engaged in the use of mass media as teachers to break the bonds of ignorance, for he believes the problems in most developing countries are not so much due to a poverty of material resources as they are due to manpower underdevelopment. He would like to use mass media to substitute for the teacher not yet trained and to support the teacher not yet trained well enough. The educational television project he undertook in El Salvador, his many trips to American Samoa and to Africa, the plans he drew up for using satellites to promote education and disseminate information on family planning in India—all of these reflect his deep concern for the welfare of the underdeveloped half of the world, and his desire to use mass communication in a way that will benefit the most people to the greatest degree.

Although he is primarily concerned with the relation between communication and economic development, particularly with the use of mass media to teach skills and disseminate information, Professor Schramm has not ignored another aspect in the developmental process, namely, political development. He is fully cognizant of the fact that economic development involves decision making, and that decision making is related to the political system. Whenever he discusses economic development he almost always points to the need for involving the people in the decision making process.

The question then arises whether communication development *per se* sufficiently contributes to increased democratic control of national government to allow a broader decision making base. Similarly, he wonders whether economic development *per se* contributes to more democratic control of communication, as reflected, for example, in freedom of the press.

While some correlations have been found between indices of economic development and freedom of the press, Schramm takes the position that economic growth does not necessarily bring about greater freedom of communication. He suggests, rather, that economic development, "with consequent greater political stability and a lower rate of social change, provides the conditions under which greater press freedom is feasible, and other

BEST COPY AVAILABLE

things being equal, that control will probably be relaxed."[5]

Regarding the relation between communication development and democratic control of national government, the answer seems to be not clear-cut either. As Professor Schramm has stated:

> It is clearly possible to use a more efficient school system to indoctrinate a generation with a desired political viewpoint. Efficient communication works as well for a dictator as for a democrat—probably better, in fact, for the dictator because he is more likely to seize a monopoly over communication. But on the other hand, it is clear that communication development provides the conditions for wider participation if the political philosophy permits it.[6]

While Schramm is extremely cautious about the impact of communication development on political democracy, a guarded optimism can be discerned in his writings and remarks made in his classes. He saw signs of change in Soviet Russia as early as ten years ago, and recent events have not contradicted his optimism.

It has been extremely difficult to summarize within a brief paper the contributions of a scholar as prolific as Professor Schramm to a field as complex as communications and national development. But one thing is quite certain. Professor Schramm is more than a scholar. He is a humanist. Instead of merely observing how social change happens to people in the developing countries, he works to help them play a part in bringing it about. People in these countries will have to decide for themselves how nearly he has succeeded.

[5] *Ibid.*, p. 55.
[6] *Ibid.*, pp. 55-6.

BEST COPY AVAILABLE

Wilbur Schramm and The Unreachable Stars: The Technological Papers

By Wayne Danielson

Almost every one of Wilbur Schramm's papers or books contains a list. The list generally distills or synthesizes what students sometimes call a "humongous" bibliography at the end. One comes to a Schramm text, then, with a great sense of relief. He is not going to make you read all those studies—he has done it for you. You are, thank heavens, just going to have to read the summary.

So here, in honor of the master, is a chance to do the same thing, as has consciously or unconsciously been done so many times by his former students. Rather than review the 20 books and the scores of articles for their technological content, there are just five things one needs to know about Wilbur Schramm in order to understand and appreciate the importance of technology in his writings on communication and they are going to be listed here. But to rephrase that sentence in Wilbur's warm and optimistic first person plural, this paper concerns: "What We Know About Wilbur Schramm and Communication Technology: The Basis for Hope."

1) The sense of urgency. To pick up any book or article by Wilbur Schramm is almost immediately to feel a sense of tension, of unease, of time scurrying on, of important tasks undone, of urgency. In India, people are starving because they cannot get simple and useful agricultural information; in New York, slum children are not learning to read; in South America and Samoa, governmental inefficiency and obstinacy is preventing the implementation of vitally needed programs. Whole nations are developing slowly or not at all because of our inability to discover what needs to be done and to mobilize the resources to do the job.

The picture Schramm paints of the African family life in the

BEST COPY AVAILABLE

opening pages of *Mass Media and National Development* is typical and poignant:

> There is a lot more to tell about the Ifes, but it all adds up to the same point: this family represents incompletely used resources. When you have seen them you come away thinking if they could only get a better diet so they would have more energy—if they could only get medical care for their worst illnesses—if someone would only explain to them clearly and persuasively why they should boil their water—if only they could be educated so as to get the fullest use of their talents. If only a bright boy did not have to be lost to schooling and literacy in the third grade! If only Ife were not wasted on subsistence agriculture, where he has no special talent, instead of being educated to the point where his bright and curious mind and his leadership qualities could be adequately employed for his own good and that of his neighbors! If only an able family like this could participate actively in the country's effort to develop into nationhood![1]

The sense of urgency, of time running out while needs remain unmet, of the compelling need to help—all are present in this paragraph, and indeed are basic to an understanding of Wilbur Schramm's work.

2) The need to be practical. Closely related to the sense of urgency in Schramm's writing, is a strong need to be practical, to move ahead, to take the first steps, to get things done. Communication research is not something we do to satisfy idle curiosity—it is something we do to solve pressing human needs. We cannot afford to study college sophomores for 200 or 300 years until we unravel the complexities of human communication systems—the needs are simply too great. We must try to leap ahead to more crucial experiments now. We must try to answer the critical questions now—and we must be willing to share with others what we know now, inadequate though that knowledge may be.

Wilbur Schramm is often spoken of as an eclectic, a synthesizer, a simplifier. He is all those things; but his eclecticism, his synthesizing, his simplifications are best understood against a background of what he is trying to accomplish. If he belongs to no apparent theoretical school, it is not because of a lack of

[1] *Mass Media and National Development* (Stanford: Stanford University Press, 1964), p. 4.

BEST COPY AVAILABLE

commitment; instead, it is because of his deep desire to let no idea escape that might be brought to bear in the solution of problems. If he breaks bread with novelists and poets and TV producers and political scientists and psychologists and sociologists and economists, it is not because he has no center, but precisely because he has a very demanding center that says, "time is wasting; troubles are mounting; we must start solving them." So he listens to all and ponders and distills and finally comes out with a set of generalizations that amaze us with their simplicity, their directness, their insight and their practicality.

An excerpt from one of Schramm's UNESCO publications expresses the central pragmatic theme of his approach to research:

> "There is nothing especially esoteric about research. It is simply the best way we have yet found to gather information systematically, accurately, and with safeguards that permit one to estimate how reliable the information is. This is accomplished through scientific sampling, adequate research design, uniform asking of questions or making observations, skillful reduction of data, and the application of suitable statistics. It is not something that one undertakes without study or training; but neither is there anything magic or mysterious about it."[2]

An understanding of Schramm's pragmatic inclination is basic to an understanding of his work in communication technology.

3) The urge to pioneer. It is noteworthy in studying Wilbur Schramm's life that he has regularly moved West. A native of Ohio, he was educated there and at Harvard, but later moved out to Iowa for the Ph.D. in American Civilization in 1932. After teaching at Iowa and at Illinois, he pushed on West again to Stanford in 1955. Now, at the usual age for retirement, he has moved to a new job at the East-West Center in Hawaii. Whether we can call this "Manifest Destiny" or not, there certainly is a strong westward-moving spirit here, a desire to be the first man in new fields, an urge to reach new territory before others arrive.

So it is that Wilbur Schramm has often been ten years or more ahead of the field in exploring the dimensions of new technology. He was writing about implications of the mathematical theory

[2] *The Role of Information in National Development* (Paris: UNESCO, 1965), p. 33.

BEST COPY AVAILABLE

of communication before most of us had read the original book; he was one of the first to make serious study of the impact of television on the children of the Fifties; he was one of the first to consider the use of communication satellites in education in developing countries. Readers were puzzled when in 1963 Arthur Lumsdaine's chapter on teaching machines and programmed instruction appeared in *The Science of Human Communication*.[3] It seemed foreign and out of place. What has programmed instruction to do with communication studies? Now, ten years later, one has only to look at the interest in programmed instruction in our own schools and departments of journalism and communication to realize that Schramm the Pioneer had laid down another furrow.

The motivation to be alive and moving on, first in the field, is charmingly depicted in one of Schramm's short stories, "Old Professors Never Die," published in the *Saturday Evening Post* in 1946. In this story, an elderly professor, Birdy Feathers, gets up, goes about his morning tasks, walks to the university, visits his office, strolls to class, opens his notebook to the proper place, and begins an old, familiar lecture on Basic Principles. Only then does he notice that no one is in the room. Thinking back over the day's events, he gradually comes to the conclusion that he is dead. In the process, he discovers a Basic Principle himself: "You don't die all at once. You die gradually. You take a long time dying. You're never completely alive or completely dead. A good many of my colleagues, Birdy Feathers thought, are deader than they know."[4]

Although there is great affection for Professor Feathers in this story, there is a hint of rejection as well. Professor Feathers is Schramm's opposite. He is exactly what Schramm never intends to be—an old, sot-in-his-ways teacher, carefully rehearsing yellowed notes miraculously preserved from an earlier generation.

Part of Schramm's interest in technology, then, can be attributed to a deeper interest in being early on the scene, in being a pioneer, in opening up new ground, in running toward life rather than away from it.

[3] Schramm, ed., New York: Basic Books, 1963, pp. 139-50.

[4] *Saturday Evening Post*, 219:16 (August 3, 1946).

BEST COPY AVAILABLE

4) The hope for technology. Wilbur Schramm was born in 1907, the year Lee DeForest invented the triode vacuum tube, opening up the world of radio and television. His years have spanned many of the great advances in communication technology—the first feature length film, the first radio station, the first talking motion picture, the first radio network, the invention of practical color photography, the first television broadcast, the first transcontinental telecast, the first communication satellite, the transistor, the computer, the first telecasts from the moon. When the historians of the next century write of this one, they may well consider this to be one of the richest periods of invention in the communication field. Wilbur Schramm's native enthusiasm and optimism was reinforced with each new advance. Each invention spurred his faith in technology as one of our great weapons against a recalcitrant natural and social environment.

(As an aside, it is interesting to note that even before Schramm came to the formal study of communication, he devoted many of his short stories to technological themes. There were stories about "Grandpa Hopewell and His Flying Tractor,"[5] "Wilbur the Jeep,"[6] and, of course, the famous *Atlantic Monthly* piece, "Windwagon Smith."[7] Windwagon was the pioneer inventor who put sails on his covered wagon and tried to navigate the plains of the Southwest, with disastrous results. In these days of fuel shortages, it wouldn't be surprising to see someone try to reinvent Windwagon's magnificent prairie schooner.)

It is not unusual, really, that the background factors just mentioned—a sense of urgency and a need to help, an inclination to pragmatism, a strong drive to pioneer, to be first—came together in a time of rapid technological development to arouse great hope for the solution of problems through the new technology of communication. In a passage on Africa Wilbur Schramm quotes Leonard Doob as follows: ". . . Anyone who has had the experience can testify to the shouts of joy which go up in

[5] "Grandpa Hopewell and His Flying Tractor," *Saturday Evening Post*, 217:12-13 (March 17, 1945) and "Grandpa Hopewell Flies Again," *Saturday Evening Post*, 218:12-13 (Jan. 26, 1946).

[6] "Wonderful Life of Wilbur the Jeep," *Saturday Evening Post*, 216:24-25 (Jan. 29, 1944).

[7] *Atlantic*, 168:26-35 (1941).

BEST COPY AVAILABLE

a village when a mobile cinema van arrives."[8] You can sense the optimism there for a technological leap that will enable Africa to skip the long process of evolution in communication—and leap directly into the modern age with rugged transistor radios, with television instruction in the villages, with programmed materials to teach reading, with direct satellite transmission of medical information to primitive hospitals, and all the rest. In Schramm's words,

"The important point is that developing countries can jump many steps in communication technology. It is not necessary for them to advance through the handpress to the steam press to the electrically driven rotary to the offset press; when appropriate, they can go to photosetting and cold type immediately. Where a new way of teaching mathematics, or a new method of learning such as programmed instruction, seems promising, a developing country can try it without first trying all its predecessors. In some cases, certainly, these newer devices and methods will save time and money, and get the information flowing more efficiently."[9]

How has it all worked out?

5) *The unreachable stars.* In the Broadway musical, *Man of La Mancha,* Don Quixote explains his quest in the following words:

> This is my quest, to follow that star,
> No matter how hopeless, no matter how far,
> To fight for the right without question or pause,
> To be willing to march into hell for a heavenly cause!
>
> And I know, if I'll only be true to this glorious quest,
> That my heart will lie peaceful and calm when I'm laid to my rest.
> And the world will be better for this,
> That one man, scorned and covered with scars,
> Still strove, with his last ounce of courage,
> To reach the unreachable stars![10]

The title for this paper was selected with *Man of La Mancha* in mind. The intention was mainly to suggest that Schramm had

[8] Leonard Doob, *Communication in Africa: A Search for Boundaries* (New Haven: Yale University Press, 1961), p. 289.

[9] *Mass Media and National Development, op cit.,* p. 269.

[10] Joe Darion, *Man of La Mancha.* New York: Random House, 1966.

set impossibly high goals for the technology of our time. He was overly optimistic. The problems were, after all, too great. The barriers were too high. The airplane that circled above Indiana broadcasting lessons to school children is grounded. A major part of educational television has evolved into public television and is, by and large, serving mainly an educated elite and not the poor and ignorant. Again and again, here and abroad, promising technologically based projects have folded when special funds from governments or foundations have run out. The stars Wilbur Schramm and many others sought to reach, seem, at this viewing, to be nearly unreachable as ever.

Yet, his has not been a Quixotic adventure—for in his tracks on four continents and in dozens of countries he has left behind many true and enduring accomplishments. Children are reading who would have been illiterate. Old men and women are alive who would have been dead. Scholars, countless scholars, here and abroad, are asking Schramm-type questions about communication, practical questions they would not have asked had he not instilled in them his own sense of the urgency of events. And surely now, when technological breakthroughs do come along, their implications for education are tested far more rapidly than in the past. Wilbur Schramm has, in effect, helped raise a whole army of little Quixotes who are willing, with him, "to march into hell for a heavenly cause." That's the basis for hope.

It must not be forgotten that Schramm is a pioneer. Even now, out in the Pacific, he is thinking about ideas the rest of us will not come upon for another decade. Indeed, he inspires the vision of our first spaceship coasting into those distant stars and finding there a little list signed "W.S." and saying: "*1)* Why did you take so long getting here?" and "*2)* I've gone on to the next galaxy."

WILBUR SCHRAMM

Personal data:

Born: August 5, 1907, Marietta, Ohio
Married: Elizabeth Donaldson, August 5, 1934
Children: Mary, born in 1937; Michael, born in 1941.

BEST COPY AVAILABLE

Education:

1928	A.B., Marietta College (with highest honors)
1930	A.M., Harvard University
1932	Ph.D., University of Iowa
1945	Litt.D. (honorary), Marietta College

Experience:

1924-30	Reporter, desk editor, correspondent, Associated Press
1932-34	National Research Fellow
1934-41	Assistant professor, associate professor, professor, English, U. of Iowa; Founder and first director, Iowa Writers Workshop
1941-43	(on leave) Educational Director, Office of Facts and Figures and Office of War Information
1943-47	Director, School of Journalism, University of Iowa
1947-55	Research professor, Director of University Press, Director and founder, Institute of Communications Research, U. of Illinois
1950-55	Dean, Division of Communications, University of Illinois
1954	(on leave) Director of research project for National Security Council
1955-73	Professor of Communication, Stanford University
1957-73	Director, Institute for Communication Research
1959-60	(on leave) Fellow, Center for Advanced Study in the Behavioral Sciences
1961-73	Janet M. Peck Professor of International Communication
1967-73	Also professor of Education, Stanford University
1973	Professor Emeritus, Stanford University
1973-	Director, Communication Institute, East-West Center, Honolulu, Hawaii

Professional activities:

National Academy of Education; Defense Science Board (1956-59); Secretary of Defense's Technical Advisory Panel on Special Operations (1954-56, chairman 1956); consultant at various times to State Department, USIA, Department of Defense, U.S. Office of Education, AID, Ford Foundation, W. K. Kellogg Foundation, Rothschild Foundation, Corporation for Public Broadcasting, Population Council, Government of India, Southeast Asia Ministers of Education Organization, European Broadcasting Union, National Educational Television, Social Science Research Council, UN, UNESCO, *N.Y. Times*, World Book, others; Educational

Policies Commission; board of editors, *Public Opinion Quarterly, Journalism Quarterly, AV Communication Review; Ikon* (Rome), *Gazette* (Leyden); W. K. Kellogg Foundation (advisory committee); Ford Foundation committee on communication fellowships and scholarships; chairman, U.S. delegation for international meeting on communication in Southeast Asia (1960); chairman, Social Psychology Section, International Association for Mass Communication Research (1959-1964); chairman, U.S. Office of Education Advisory Committee on educational media (1963-66); chairman, National Academy of Sciences committee on information in the behavioral sciences; UNESCO Advisory Panel on Space Communication, 1966-; steering committee, ERIC (Educational Research Information Center); President's Library Commission (1968); U.S. delegate, UN Conference on Peaceful Uses of Outer Space, 1968.

Organizations:

American Psychological Assn.; American Sociological Society; American Assn. for the Advancement of Science; American Assn. for Public Opinion Research; Assn. for Education in Journalism; Phi Beta Kappa; Delta Upsilon; Sigma Chi; Kappa Tau Alpha

Honors:

O. Henry prize for fiction (1942), published as Windwagon Smith and Other Stories; twice winner of Kappa Tau Alpha prize for year's best research in field; George Polk prize; University of Missouri Gold Medal for distinguished service to communication and journalism; others. Fellow, Center for Advanced Study in the Behavioral Sciences; senior fellow, East-West Center; first annual Japan Prize lecturer (1969); inaugural lecturer, Indian Institute of Mass Communication; lecturer, University of Paris, University of London, University of Stockholm, Makerere College, USSR Academy of Science, others; licensed aircraft pilot.

BEST COPY AVAILABLE

WILBUR SCHRAMM

An Incomplete Bibliography[1]

Scholarly Works

1932 "Hiawatha and Its Predecessors," *Philological Quarterly*, 11: 321-43.

1933 "Campion, Horace, and Catullus," *Philological Quarterly*, 12: 307-8.

"The Cost of Books in Chaucer's Time," in *Modern Language Notes*, 48:139-45.

1934 (With Carl Seashore) "Time and Intensity in English Tetrameter Verse," *Philological Quarterly*, 13:65-71.

"Scholarship Swallows Itself," *American Review*, 4:19-28.

1935 "Melodies of Verse," *Science*, 82:61-2.

"What Is a Syllable?" *Science Monthly*, 40:552-5.

Approaches to a Science of English Verse, with an Introduction by Carl E. Seashore and Joseph Tiffin. (Iowa City, Iowa: University of Iowa), 82 pp.

1937 "Parkman's Novel," *American Literature*, 9:218-27.

1938 "Ed Howe Versus Time," *Saturday Review of Literature*, 17: 10-11.

1939 "Careers at Crossroads," *Virginia Quarterly Review*, 15:627-32.

1940 "New Englander on the Road to Oregon," *New England Quarterly*, 13:49-64.

1941 "Imaginative Writing," in N. Foester and others, *Literary Scholarship, Its Aims and Methods* (Chapel Hill: The University of North Carolina Press), pp. 175-213.

1945 "Reading and Listening Patterns of American University Students," *Journalism Quarterly*, 22:23-33.

1946 (Editor) Radio Journalism, special number, *Journalism Quarterly*, 23:137-201.

"What Radio News Means to Middleville," *Journalism Quarterly*, 23:173-81.

1948 (Editor) *Communications in Modern Society*, Fifteen Studies Prepared for University of Illinois Institute of Communication Research, with an introduction by the editor, vi + 252 pp.

[1] The editor is endebted to Prof. Chu and Schramm himself for the labor of putting this bibliography together. It is incomplete in that certain early papers in the field of literary scholarship appearing between 1935 and 1942 could not be found, translations of his works into other languages are listed only partially and book reviews were omitted deliberately. The stories are listed separately below.

~~11~~ 39 41 ~~46~~

"Measuring Another Dimension of Newspaper Readership," *Journalism Quarterly*, 24:293-406.

1949 (With David M. White) "Age, Education, Economic Status: Factors in Newspaper Reading," *Journalism Quarterly*, 26: 149-59.

"The Effects of Mass Communication: A Review," *Journalism Quarterly*, 26:397-409.

"The Nature of News," *Journalism Quarterly*, 26:259-69.

1951 (With J. W. Riley, Jr.) "Communication in the Sovietized State, as Demonstrated in Korea," *American Sociological Review*, 16:757-66.

(With J. W. Riley, Jr. and F. W. Williams) "Flight from Communism: A Report on Korean Refugees," *Public Opinion Quarterly*, 15:274-84.

(With J. W. Riley, Jr.) *The Reds Take a City: The Communist Occupation of Seoul, with Eye-witness Accounts.* (New Brunswick, N.J.: Rutgers University Press), 210 pp.

(With Wayne Danielson) "Anticipated Audiences as Determinants of Recall," *Journal of Abnormal and Social Psychology*, 28:282-3.

(With Merrill Ludwig) "The Weekly Newspaper and Its Readers," *Journalism Quarterly*, 28:301-14.

1953 (As chairman of citizens' committee) *U.S. Information Agency*, A Program of Research and Evaluation for the International Information Administration; Recommendations of a Special Committee to the Administrator. Washington, D.C., June 15, 1953. 27 pp.

1954 (With R. W. Beckman) "Manpower Needs in Radio News: AATJ and NAB Survey Results," *Journalism Quarterly*, 21: 256-7.

"Procedures and Effects of Mass Communication," in *Mass Media and Education*, Fifty-third Yearbook of the National Society for the Study of Education (Chicago: National Society for the Study of Education), 113-38.

(With J. W. Riley, Jr.) "Los Rojos Toman una Ciudad," Mexico: *Editorial Confidencias.*

(Editor) Mass Communication. (Japanese translation published by Sogen Sha Co., Ltd., Tokyo).

1955 "Information Theory and Mass Communication," *Journalism Quarterly*, 32:131-46.

BEST COPY AVAILABLE

Four Working Papers on Propaganda Theory. Written with the help of USIA, under contract 1A-W-362, between USIA and the Institute of Communications Research, University of Illinois. Urbana, Illinois: University of Illinois, 145 pp.

"Notes on the British concept of propaganda," in Four Working Papers on Propaganda Theory, *ibid.*, 65-97.

(With Hideya Kumata) "The Propaganda Theory of the German Nazis," in Four Working Papers on Propaganda Theory, 33-64.

"The Soviet Concept of 'Psychological' Warfare," in Four Working Papers on Propaganda Theory, 99-145.

1956 (With Fred S. Siebert and Theodore Peterson) *Four Theories of the Press.* (Urbana, Illinois: University of Illinois Press), 146 pp.

"The Soviet Communist Theory," in Siebert, Peterson and Schramm (editors), *Four Theories of the Press,* 105-46.

(With H. Kumata) "A Pilot Study of Cross-cultural Meaning," *Public Opinion Quarterly,* 20:229-37.

"Why Adults Read," in *Adult Reading,* Fifty-fifth Yearbook of the National Society for the Study of Education, Part II. (Chicago: National Society for the Study of Education), 57-88.

1957 *Responsibility in Mass Communication,* with Introduction by Reinhold Niebuhr (New York: Harper & Brothers), 391 pp.

"Twenty years of Journalism Research," *Public Opinion Quarterly,* 21:91-107.

(With J. W. Riley, Jr.) *Os Vermelhos Atacam Uma Cidade* (Rio de Janeiro: Editora Ipanema Ltda).

1958 "Newspapers of a State as a News Network," *Journalism Quarterly,* 35:177-82.

"Propaganda Theory of the German Nazis," in W. Daugherty and M. Janowitz (editors), *A Psychological Warfare Casebook* (Baltimore, Maryland: The Johns Hopkins Press, 47-57).

"Soviet Concept of Psychological Warfare," in W. Daugherty and M. Janowitz (editors), *A Psychological Warfare Casebook,* 779-88.

1959 (Editor) *One Day in the World's Press: Fourteen Great Newspapers on a Day of Crisis* (Stanford, California: Stanford University Press), 138 pp.

Responsibility in Mass Communication (in Japanese). Published in Japan by arrangement with Harper & Brothers.

(With Fred S. Siebert and Theodore B. Peterson) *Four Theories of the Press* (Japanese translation published by Tokyo-Sogensha, Toyko).

"Comments on 'The State of Communication Research,'" *Public Opinion Quarterly,* 23:5-9.

(With Richard F. Carter) "The Effectiveness of a Political Telethon," *Public Opinion Quarterly,* 23:6-17.

1960 (Editor) *Mass Communications* (Urbana: University of Illinois Press, 1949), viii + 621 pp. Revised edition, with foreword by editor (Urbana: University of Illinois Press, 1960), xi + 695 pp.

"A Note on Children's Use of Television," in Schramm (editor), *Mass Communications,* 214-26.

(With Jack Lyle and Edwin B. Parker) "Patterns in Children's Reading of Newspapers," *Journalism Quarterly,* 37:149-59.

(Editor) *The Impact of Educational Television.* Selected studies from the Research Sponsored by National Educational Television and Radio Center (Urbana: University of Illinois Press), viii + 247 pp.

"The Audiences of Educational Television," in Schramm (editor), *The Impact of Educational Television,* 18-38.

1961 (With Ruth T. Storey) *Little House: A Study of Senior Citizens,* with a foreword by Ernest R. Hilgard (Menlo Park, California: Peninsula Volunteers, Inc., and Stanford, California: Institute for Communication Research, Stanford University), xvi + 351 pp.

(Editor) *Case Studies in Bringing Behavioral Science into Use,* with a foreword by Wilbur Schramm (Stanford, California: Institute for Communication Research, Stanford University), viii + 135 pp.

"Content Analysis of the World of Confession Magazines," in J. C. Nunnaly, Jr. (editor), *Popular Conceptions of Mental Health, Their Development and Change* (New York, N.Y.: Holt, Rinehart and Winston, Inc.), 297-307.

(With Jack Lyle and Edwin B. Parker) *Television in the Lives of Our Children* (Stanford, California: Stanford University Press), vii + 324 pp.

1962 (Editor) *Educational Television, the Next Ten Years,* with a foreword by the editor. Report for U.S. Office of Education (Stanford, California: Institute for Communication Research, Stanford University), xi + 375 pp.

BEST COPY AVAILABLE

"A Note on the Audiences of Educational Television," in Schramm (editor), *Educational Television: The Next Ten Years*, 346-53.

"What We Know About Learning from Instructional Television, in Schramm (editor), *Educational Television: The Next Ten Years*, 52-76.

"Learning from Instructional Television, *Review of Educational Research*, 32:156-67.

Programed Instruction Today and Tomorrow (New York: Fund for the Advancement of Education), 74 pp.

(Editor) *Paris-Stanford Studies in Communication* (Stanford, California: Institute for Communication Research, Stanford University), vii + 137 pp.

"Science and the Public Mind," in Schramm (editor), *Paris-Stanford Studies in Communication*, 17-47.

"Mass Communications," *Annual Review of Psychology*, 13: 251-84.

1963 (With Jack Lyle and Ithiel de Sola Pool) *The People Look at Educational Television*. A report of nine Representative ETV Stations (Stanford, California: Stanford University Press), 209 pp.

Report of the Mass Communication Study Team Sponsored by the Ford Foundation in Cooperation with the Ministry of Information and Broadcasting. New Delhi: Faridabad, India: Government of India Press, 34 pp.

(Editor) Studies of Innovation and of Communication to the Public. Studies in the Utilization of Behavioral Science, Vol. II. (Stanford, California: Institute for Communication Research, Stanford University), viii + 286.

"The Challenge to Communication Research," in R. O. Nafziger and D. M. White (editors), *Introduction to Mass Communications Research* (Baton Rouge, La.: Louisiana State University Press, 1958; revised edition, 1963, 3-31.

(Editor) *The Science of Human Communication*. With a foreword by the editor. (New York: Basic Books, Inc.), viii + 158 pp.

"Communication Research in the United States," in Schramm (editor), *The Science of Human Communication*, 1-16.

Programmierter Unterricht Heute und Morgen (Berlin: Cornelsen Verlag).

1964 *Grundfragen der Kommunikations-forschung* (Munchen: Juventa Verlag).

(Editor) *Four Case Studies of Programmed Instruction*, with an introduction by editor (New York, N.Y.: Fund for the Advancement of Education), 119 pp.

Appendix: "Programmed instruction today and tomorrow" (reprint). In Schramm (editor), *Four Case Studies of Programmed Instruction*, 98-115.

"Programmed Instruction in Denver," in Schramm (editor), *Four Case Studies of Programmed Instruction*, 30-40.

The Context of Instructional Television: Summary Report of Research Findings, the Denver-Stanford Project. (Denver, Colorado and Stanford, California: Denver public schools and Institute for Communication Research, Stanford University), x + 160. Appendix: a-1 to a-63.

The Research on Programmed Instruction, an Annotated Bibliography. Prepared Under Contract with HEW Office of Education by Institute for Communication Research, Stanford University, Stanford, California (Washington: U.S. Government Printing Office), iii + 114 pp.

Mass Media and National Development. The Role of Information in the Developing Countries. With a foreword by UNESCO and Preface by Author (Stanford, California: Stanford University Press and UNESCO, Paris), xiv + 333 pp.

The Effects of Television on Children and Adolescents: Reports and Papers on Mass Communication No. 43 (Paris: UNESCO).

1965 "Communication in Crisis," in Bradley Greenberg and Edwin B. Parker (editors), *The Kennedy Assassination and the American Public: Social Communication in Crisis* (Stanford, California: Stanford University Press).

"Introduction: Communication in Crisis," in Bradley Greenberg and Edwin B. Parker (editors), *The Kennedy Assassination and the American Public: Social Communication in Crisis*, 1-25.

(With Jack Lyle and Edwin B. Parker) *Television para Los Ninos* (Barcelona, Espana: Editorial Hispano-Europea).

1966 *L'information et le developpement national* (Paris: UNESCO).

"Two Concepts of Mass Communication," in Bernard Berelson and Morris Janowitz (editors), *Reader in Public Opinion and*

BEST COPY AVAILABLE

Communication, Second Edition (New York, N.Y.: The Free Press), 206-19.

"Information Theory and Mass Communication," in Bernard Berelson and Morris Janowitz (editors), *Reader in Public Opinion and Communication*, Second edition (New York, N.Y.: The Free Press, 712-32. Also in A. G. Smith (editor), *Communication and Culture* (New York, N.Y.: Holt, Rinehart and Winston), pp. 521-34.

"TV as Scapegoat," in J. F. Rosenblith and W. Allinsmith (editors), *The Causes of Behavior, II: Readings in Child Development and Educational Psychology*, Second edition (Boston, Massachusetts: Allyn and Bacon, Inc.), 216-18.

1967 (Editor, with Daniel Lerner) *Communication and Change in the Developing Countries*, with foreword by Lyndon B. Johnson (Honolulu, Hawaii: The University Press of Hawaii, 1967), xiv + 333 pp. Third printing, 1972.

"Communication and Change," in Schramm and Lerner (editors), *Communication and Change in the Developing Countries*, 5-32.

(With W. Lee Ruggels) "How Mass Media Systems Grow," in Schramm and Lerner (editors), *Communication and Change in the Developing Countries*, 57-75.

(Chairman) Report of Subcommittee on Dissemination of Scientific Information to Behavioral Scientists. For National Academy of Sciences–National Research Council, January, 39 pp.

(With Serena Wade) Knowledge and the Public Mind: A Preliminary Study of the Distribution and Sources of Science, Health and Public Affairs Knowledge in the American Public (Stanford, California: Institute for Communication Research, Stanford University), 163 pp.

(With Philip H. Coombs, Friedrich Kahnert and Jack Lyle) *New Educational Media in Action: Case Studies for Planners*, with a preface by Coombs (Paris: UNESCO, International Institute for Educational Planning Case Studies). Three volumes, 203 pp., 226 pp., 198 pp.

(With Lyle M. Nelson, William R. Odell, John Vaizey and Seth Spaulding) "Education Television in American Samoa," in *New Educational Media in Action*, Vol. I, 11-68.

(With P. V. Krishnamoorthy, D. D. Jahdav, J. P. Bhattacharjee,

Douglas Ensminger, W. Bert Johnson and R. Lyle Webster) "Ten years of the Rural Radio Forum in India," in *New Educational Media in Action*, Vol. I, 105-34.

(With Momluang Pin Malakul, Khunying Ambhorn Meesook, Prani Pookpakdi and Saising Siributr) "Educational Radio in Thailand," in *New Educational Media in Action*, Vol. I, 83-104.

(With Isao Amagi, Kazuhiko Goto, Masanori Hiratsuka and Yukihiro Kumagai) "Japan's Broadcast-Correspondence High School," in *New Educational Media in Action*, Vol. I, 135-68.

(With Godwin C. Chu) *Learning from Television: What the Research* Says (Washington: National Association for Educational Broadcasters), v + 116 pp.

(With Philip H. Coombs, Friedrich Kahnert and Jack Lyle) *The New Media: Memo to Educational Planners*, with a foreword by Rene Maheu (Paris: UNESCO, International Institute for Educational Planning), 175 pp.

Mass Media in Developing Countries. Translated into Korean from Kappa Tau Alpha Yearbook and published in *Non Dan* (Forum), Vol 2, No. 4, Spring 1967, 72-82.

"Communication," in *World Book Encyclopedia* (Chicago: Field Publishing Co., IV), 710-23.

The Audiences of Educational Television, a Report to NET (Stanford, California: Institute for Communication Research, Stanford University), 90 pp.

1968 "Mass Communication: Control and Public Policy," *International Encyclopedia of the Social Sciences*, Vol. 3 (New York: Macmillan and Free Press), 55-61.

"Communication Satellites for Education, Science and Culture," Reports and Papers on Mass Communication No. 53. (Paris: UNESCO), 23 pp.

(With Lyle M. Nelson) "Communication Satellites for Education and Development—The Case for India." Prepared for the President's Task Force on Communication Policy (Menlo Park, California: Stanford Research Institute), 204 pp. Appendix A-1 to 26; Appendix B-1 to 12; Appendix C-1 to 19. References: 205-12.

1969 "Instructional Television Here and Abroad," in *The Schools and the Challenge of Innovation*, supplementary Paper No. 28, Committee for Economic Development, New York, N.Y., 242-69.

The Mass Media in Family Planning Campaigns, in R. Blake

BEST COPY AVAILABLE

(editor), Final Report, International Workshop on Communication Aspects of Family Planning Programs, Bangkok, Thailand. Chapel Hill, North Carolina: The Carolina Population Center, University of North Carolina, 9-14.

(With Serena Wade) "The Mass Media as Sources of Public Affairs, Science, and Health Knowledge," *Public Opinion Quarterly*, 33:197-209.

(With William L. Rivers) *Responsibility in Mass Communication* (Rev.) (New York: Harper & Row), vi + 314 pp.

"The New Educational Technology," in G. Z. F. Bereday (editor), *Essays on World Education: The Crisis of Supply and Demand* (New York, N.Y.: Oxford University Press), 133-52.

Classroom Out-of-doors: Education Through School Camping (Kalamazoo, Mich.: Sequoia Press/Publishers).

1970 "Learning from Television: What the Research Says," in *To Improve Learning, an Evaluation of Instructional Technology*, Vol. I, Part II, Instructional Technology: selected working papers on The State of the Art (New York, N.Y.: R. R. Bowker Co.), 179-82.

(With Lyle Nelson) Report of the Educational Television Task Force. Honolulu, Hawaii: University of Hawaii-American Samoa Contract, 88 pp.

"The Future of Educational Radio and Television," The Japan Prize Lecture, 1969, in *The Japan Prize, 1969* (Tokyo: NHK The Japan Broadcasting Corporation), 77-83.

(With Robert Filep) The Impact of Research on Utilization of Media for Educational Purposes. El Segundo, California: Institute for Educational Development. vi + 66 pp. + appendix 44 pp.

Comunicacao de Massa e Desenvolvimento (Rio de Janeiro: Bloch Editores).

1971 (With Jack Lyle and Edwin B. Parker) *La Televisione Nella Vita dei Nostri Figli* (Milano, Italy: Franco Angeli Editore).

Programed Instruction: Today and Tomorrow (Arabic translation published by UNRWA and UNESCO).

The Next Ten Years: How to Look at an Exhibition of Instructional Technology. Stanford, California: Institute for Communication Research, for the Visodata Conference, Munich, October 1971, 14 pp.

"The Mass Media in the North American Life Cycle," in *Public et Techniques de la Diffusion Collective* (Brussels: Editions de l'Institut de Sociologie), 381-400.

(With the assistance of John Mayo) Notes on Case Studies of Instructional Media Projects. Stanford, California: Institute for Communication Research, Stanford University, 41 pp.

Notes on Instructional Cross-Media Comparisons. Stanford, California: Institute for Communication Research, Stanford University, 53 pp.

Communication in Family Planning, Reports on Population/Family Planning, No. 7 April, 43 pp.

Family Planning Information in the Seventies. Chicago: University of Chicago Center for Continuing Education, 12 pp.

"The Things We Know About Family Planning Information," in R. Blake (editor), Final Report, International Workshop on Communications in Family Planning Programs in Iran. Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina, 12-21.

(With Donald F. Roberts) "Children's Learning from Mass Media," *The Encyclopedia of Education*, Vol. 6, 69-75 (New York: Macmillan and Free Press).

"How Communication Works," in J. De Vito (editor), *Communication: Concepts and Processes* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc.), 12-21.

(Editor with Donald F. Roberts) *The Process and Effects of Mass Communication*, Rev. edition (Urbana, Illinois: University of Illinois Press), ix + 997 pp.

"Communication in Crisis," in Schramm and Roberts (editors), *The Process and Effects of Mass Communication*, 525-53.

"The Nature of Communication Between Humans," in Schramm and Roberts (editors), *The Process and Effects of Mass Communication*, 3-54.

"What TV is Doing to Our Children," in A. and L. Kirschner (editors), *Radio and Television, Readings in the Mass Media* (New York: The Odyssey Press), 155-63.

Television Reconsidered. Singapore: First General Assembly of the Asian Mass Communication Research and Information Centre. Published, AMIC, 1972.

1972 (Chairman, with Harold Howe and David Hawkridge) An "Everyman's University" for Israel, Report Submitted to Hanadiv, Jerusalem, Israel, 91 pp.

BEST COPY AVAILABLE

(With Lyle M. Nelson) The Financing of Public Television, With an introduction by Douglas Cater. Palo Alto, California: Communication and Society, a joint program of the Aspen Institute for Humanistic Studies and the Academy for Educational Development, Inc., x + 59 pp.

(Editor) *Quality in Instructional Television* (Honolulu, Hawaii: The University Press of Hawaii), 226 pp.

"What the Research Says," in Schramm (editor), *Quality in Instructional Television*, 44-79.

Mass communication. For the *Enciclopedia Italiana*. Stanford, California: Institute for Communication Research, Stanford University, 69 pp.

1972-3 Learning in American Samoa, A Review of the Test Results. Stanford, California: Institute for Communication Research, Stanford University.

1973 (With William L. Rivers) *Responsabilidad y Communicacion de Masas* (Buenos Aires: Ediciones Troquel).

(With William L. Rivers) *Responsibility in Mass Communication* (in Korean) (Seoul, Korea: Sejong Publishing Co.)

(With Daniel Lerner) *Comunicacao e Mudanca nos Paises em Desenvolvimento* (Sao Paulo; Editora da Universidade de Sao Paulo).

(Editor, with Ithiel de Sola Pool, *et al.*) *Handbook of Communication* (Chicago, Illinois: Rand McNally College Publishing Co.), ix + 1011 pp.

"Channels and Audiences," in Schramm and de Sola Pool (editors), *Handbook of Communication*, 116-40.

"Mass Communication," in George A. Miller (editor), *Communication, Language, and Meaning: Psychological Perspectives* (New York: Basic Books, Inc., 219-30.

(With Janet Alexander) "Broadcasting," in Schramm and de Sola Pool (editors), *Handbook of Communication*, 577-618.

Men, Messages, and Media: A Look at Human Communication (New York: Harper & Row), 341 pp.

Big Media, Little Media. A report to the Agency for International Development. Stanford, California: Institute for Communication Research, Stanford University, xiii + 333 pp.

Instructional Television in the Education Reform of El Salvador. Washington, D.C.: Academy for Educational Development, Information Center on Instructional Technology, 89 pp.

ITV in American Samoa—After Nine Years. Stanford, California: Institute for Communication Research, Stanford University, v + 55 pp.

Some Tentative Conclusions Concerning Instructional Television, For the National Academy of Education. Stanford, California: Institute for Communication Research, Stanford University, 8 pp.

(With Robert C. Hornik, Henry T. Ingle, John K. Mayo and Emile G. McAnany) Television and Educational Reform in El Salvador. Research report on the Educational Reform of El Salvador prepared by members of the Institute for Communication Research, Stanford University, on behalf of AED under contract to USAID, xix + 322 pp.

(With Richard F. Carter) Scales for Describing National Communication Systems. Stanford, California: Institute for Communication Research, Stanford University (undated), 15 pp.

Motion pictures and real-life violence: What the research says. A working paper for the Motion Picture Association of America. Stanford, California: Institute for Communication Research, Stanford University (undated), 52 pp.

1974 "The Problem of Making Research Useful," *Media Asia*, 1, 5-11.

(With Godwin Chu and Frederick T. C. Yu) China's Experience with Development Communication: How Transferrable Is It? Honolulu, Hawaii: Communication Institute, East-West Center. 24 pp.

Stories

"Windwagon Smith," *Atlantic Monthly*, 1941.

"Dan Peters and Casey Jones," "The Horse That Played Third Base for Brooklyn," "My Kingdom for Jones," "The Flying Coffin," "The Wonderful Life of Willie the Jeep," "Boone over the Pacific," "Death and Old Feathers," "Old Professors Never Die," "The Blue Air over Kansas," "Why There Are No Ordinary Men in Iowa," "Grandpa Hopewell and His Flying Tractor," "Grandpa Hopewell Rides Again," "Voice in the Earphones," *Saturday Evening Post*, 1942-47.

Windwagon Smith and Other Yarns, Illustrated by Joe Krush (New York: Harcourt, Brace), 208 pp, 1947.